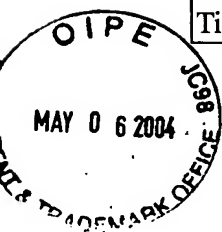


THE PATENT OFFICE OF THE PEOPLE'S REPUBLIC OF CHINA

Address: 6 Xi Tu Cheng Lu, Haidian, Beijing

Post Code: 100088

Applicant:	HITACHI GLOBAL STORAGE TECHNOLOGIES JAPAN, LTD.	Date of Notification: Date: <u>05</u> Month: <u>03</u> Year: <u>2004</u>
Attorney:	WANG YIPING	
Application No.:	02105061.9	
Title of the Invention:	MAGNETIC DISK DEVICE AND SERVO WRITE METHOD	



Notification of the First Office Action

1. ☒ The applicant requested examination as to substance and examination has been carried out on the above-identified patent application for invention under Article 35(1) of the Patent Law of the People's Republic of China(hereinafter referred to as "the Patent Law").
☐ The Chinese Patent Office has decided to examine the application on its own initiative under Article 35(2) of the Patent Law.
2. ☒ The applicant claimed priority/priorities based on the application(s):
filed in JP on 6/6/2001, filed in _____ on _____,
filed in _____ on _____, filed in _____ on _____,
filed in _____ on _____, filed in _____ on _____.
☐ The applicant has provided the priority documents certified by the Patent Office where the priority application(s) was/were filed.
☐ The applicant has not provided the priority documents certified by the Patent Office where the priority application(s) was/were filed and therefore the priority claim(s) is/are deemed not to have been made under Article 30 of the Patent Law.
☐ The application is a PCT continuation.
3. ☐ The applicant submitted amendments to the application on _____ and on _____, wherein the amended _____ submitted on _____ and the amended _____ submitted on _____ are not acceptable, because said amendments do not comply with ☐Article 33 of the Patent Law.
☐Rule 51 of the Implementing Regulations of the Patent Law.
The specific reasons why the amendments are not allowable are set forth in the text portion of this Notification.
4. ☒ Examination as to substance was directed to the initial application documents as filed.
☐ Examination as to substance was directed to the documents as specified below:
pages _____ of the description, claims _____ and pages _____ of the drawings submitted on _____,
pages _____ of the description, claims _____ and pages _____ of the drawings submitted on _____,
pages _____ of the description, claims _____ and pages _____ of the drawings submitted on _____,
the abstract submitted on _____, and the figure for the abstract submitted on _____.
5. ☐ This Notification is issued without search reports.
☒ This Notification is issued with consideration of the search results.
☒ Below is/are the reference document(s) cited in this Office Action(the reference number(s) will be used throughout the examination procedure):

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No.	Number(s) or Title(s) of Reference(s)	Date of Publication (or the filing date of conflicting application)
1	US 6040955 A	Date: <u>21</u> Month: <u>03</u> Year: <u>2000</u>
2	JP 11-259999 A	Date: <u>24</u> Month: <u>09</u> Year: <u>1999</u>
3		Date: __ Month: __ Year: __
4		Date: __ Month: __ Year: __
5		Date: __ Month: __ Year: __

6. Conclusions of the Action:

☐ On the Specification:

- ☐ The subject matter contained in the application is not patentable under Article 5 of the Patent Law.
- ☐ The description does not comply with Article 26 paragraph 3 of the Patent Law.
- ☐ The draft of the description does not comply with Rule 18 of the Implementing Regulations.

☒ On the Claims:

- ☐ Claim(s) _____ is/are not patentable under Article 25 of the Patent Law.
- ☐ Claim(s) _____ does/do not comply with the definition of inventions prescribed by Rule 2 paragraph 1 of the Implementing Regulations.
- ☒ Claim(s) 1 does/do not possess the novelty as required by Article 22 paragraph 2 of the Patent Law.
- ☒ Claim(s) 2-3 does/do not possess the inventiveness as required by Article 22 paragraph 3 of the Patent Law.
- ☐ Claim(s) _____ does/do not possess the practical applicability as required by Article 22 paragraph 4 of the Patent Law.
- ☐ Claim(s) _____ does/do not comply with Article 26 paragraph 4 of the Patent Law.
- ☐ Claim(s) _____ does/do not comply with Article 31 paragraph 1 of the Patent Law.
- ☐ Claim(s) _____ does/do not comply with the provisions of Rules 20-23 of the Implementing Regulations.
- ☐ Claim(s) _____ does/do not comply with Article 9 of the Patent Law.
- ☐ Claim(s) _____ does/do not comply with the provisions of Rule 12 paragraph 1 of the Implementing Regulations.

7. In view of the conclusions set forth above, the Examiner is of the opinion that:

- ☐ The applicant should make amendments as directed in the text portion of the Notification.
- ☒ The applicant should expound in the response reasons why the application is patentable and make amendments to the application where there are deficiencies as pointed out in the text portion of the Notification, otherwise, the application will not be allowed.
- ☐ The application contains no allowable invention, and therefore, if the applicant fails to submit sufficient reasons to prove that the application does have merits, it will be rejected.

8. The followings should be taken into consideration by the applicant in making the response:

- (1) Under Article 37 of the Patent Law, the applicant should respond to the office action within 4 months counting from the date of receipt of the Notification. If, without any justified reason, the time limit is not met, the application shall be deemed to have been withdrawn.
- (2) Any amendments to the application should be in conformity with the provisions of Article 33 of the Patent Law. Substitution pages should be in duplicate and the format of the substitution should be in conformity with the relevant provision contained in "The Examination Guidelines".
- (3) The response to the Notification and/or revision of the application should be mailed to or handed over to the "Reception Division" of the Patent Office, and documents not mailed or handed over to the Reception Divisions have no legal effect.
- (4) Without an appointment, the applicant and/or his agent shall not interview with the Examiner in the Patent Office.

9. This Notification contains a text portion of 2 pages and the following attachments:

- ☒ 2 cited reference(s), totaling 19 pages. ☐

Examination Dept. 3-5 Examiner: ZHANG XIAOHUI Seal of the Examination Department

Notification of the First Office Action

As described in the specification, this application relates to a magnetic disk device and a servo write method. After examination, the examiner provides the following comments:

1. Claim 1 has not novelty and contradicts Article 22.2 of the Chinese Patent Law.

Claim 1 seeks to protect a servo write method of a magnetic disk device, while reference 1 discloses a self servo writing method of writing a servo pattern in a direct access storage device (see lines 36-37, column 2 and lines 23-25 of column 9) (the self servo writing is actually that, a magnetic disk has a phase of not^{no} recording^{no} the information for locating the magnetic head before it is firstly used, and write the information for detecting recording region when it is used), and specially discloses that, an original servo pattern is written on the data storage media at a first crash stop (see lines 36-37 of column 2), and when a latch is released a small current is applied to move the actuator to the crash stop of outer circumstance of the magnetic disk and writes the servo patterns here (see lines 37-39 and lines 63-67 of column 4) (which corresponds that the signal for detecting the recording region is written when the magnetic head of the magnetic disk itself is loaded).

Moreover, reference 1 also discloses that the transducer heads are continuously moved offset from the written servo information while reading the last written servo information until the detected servo signal equals a predetermined value and then servo information is written on the data storage media responsive to the detected servo signal equal to the predetermined value (see lines 36-67 of column 2) (corresponds to the feature of determining a servo signal writing region of a magnetic disk on the basis of the position of writing the servo signal).

Thus reference 1 discloses all of the technical features of this claim. Moreover, reference 1 and this claim belong to the same technical field, and they can produce the same technical effects. So claim 1 has not novelty.

2. Claim 2 has not inventiveness and contradicts Article 22.3 of the Chinese Patent Law.

Reference 1 discloses a magnetic disk device for storing information, a motor for driving

said magnetic disk to rotate, a transducer head for recording, a transducer head for reproducing, arms for supporting the magnetic head to move on the magnetic disk, and a driving mechanism for driving the arms (see line 60 of column 3 to line 45 of column 4, line 5 of column 10 to line 25 of column 12 and figure 2 of reference 1), and it discloses that, while the magnetic head is loaded, the signal for detecting the recording region is written on said magnetic disk, and the recording region of the magnetic track on the magnetic disk is determined on the basis of the position of writing the recording region detecting signal (see lines 36-67 of column 2).

Claim 2 differs from reference 1 in that, a ramp road^{road} for resting the retreated magnetic heads thereon and a stopper for limiting the movable range of said actuator are used in the magnetic disk. Moreover, it can be considered based on the above-mentioned different technical feature that, the technical problem that claim 1 actually seeks to solve in view of reference 1 is to limit the movable range of the magnetic head arms through the above-mentioned two devices. However, magnetic head arm assembly contact loading/unloading slope is usually used in a noncontact start/stop type hard disk (CSS), which belongs to the general knowledge in this art and is obvious for the skilled in this art.

Meanwhile, reference 2 also discloses that when the signal 13 for detecting the position is read out, the spindle motor stops driving the magnetic disk to rotate, and a lock device press the protruding portion 4a of the arms onto a stopper 7 provided in the inner circumstance in order to fix the magnetic head arms (see the abstract of reference 2) (corresponding to the stopper for limiting the movable range of the actuator).

Thus, references 1 and 2 disclose all of the technical features of this claim. It is obvious for the skilled in the art to obtain claim 2 by combining reference 1 with reference 2 and the general knowledge in this art, and claim 2 does not have prominent substantive feature or represents a notable progress, so claim 2 has not inventiveness.

3. Claim 3 has not inventiveness and contradicts Article 22.3 of the Chinese Patent Law.

In a noncontact start/stop type hard disk (CSS), a magnetic head arm loading/unloading retreated slope is used to enlarge the magnetic disk storage region, that is, the magnetic disk is not needed to contact the start/stop region, and all of the location from the outer circumstance

to the inner circumference of the magnetic disk can be the recording region of the magnetic track.

On the basis of reference 1, reference 2 discloses that, when signal 13 for detecting the position is read out, the spindle motor stops driving the magnetic disk to rotate, and a lock device press the protruding portion 4a of the arms onto the stopper 7 provided in the inner circumference in order to fix the magnetic head arms (see the abstract of reference 2).

Thus, references 1 and 2 disclose all of the technical features of this claim. It is obvious for the skilled in the art to obtain claim 3 by combining reference 1 with reference 2 and the general knowledge in this art, and claim 3 does not have prominent substantive feature or represents a notable progress, so claim 3 has not inventiveness.

4. Since claim 2 has not inventiveness as required in Article 22.3 of the Chinese Patent Law, the independent claims should be amended, and one or more of dependent claims 4-8 should be an independent claim, and the preamble portion and characteristic portion of the new independent claim should be clearly partitioned based on the references.

Conclusion:

For the reasons above, this application cannot be patented based on the present text. The applicant should make amendments to the application documents to overcome the existing substantive defects according to the comments in this office action in due time; otherwise this application will be finally rejected. Moreover, the amendments should comply with Article 33 of Chinese Patent Law that they shall not go beyond the original specification and the claims. Meanwhile, please be more care of the stipulation of Rules 42 and 52 of the Implementing Regulations of the Chinese Patent Law.

The applicant should provide the following documents when filing the amended documents. Namely, first, copies of the original text that are amended, on which the addition, the deletion and the replacement should be marked with red ink; second, replacement pages that are reprinted for replacing the corresponding original text. The applicant should assure that the above-mentioned two parts are consistent with each other.